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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,814	03/27/2001	Donald G. Newberg	CM04753H	9970
22917	7590	10/03/2005	EXAMINER SAM, PHIRIN	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			ART UNIT 2661	PAPER NUMBER

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,814

Applicant(s)

NEWBERG ET AL.

Examiner

Phirin Sam

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 4 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 1-3, 5-12, 14, 15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,567,416 (hereinafter referred as "Chuah") in view of US Patent 6,370,153 (hereinafter referred as "Eng").

Chuah discloses the invention (**amended claims 1 and 9**) as claimed including in a communication system adapted for communicating information in one or more time slots within a predetermined bandwidth, a method comprising:

- (a) communicating information, by at least one communication unit, in selected one or more random access sub-slots (see Fig. 4 and 23, col. 11, lines 20-29);

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- (b) wherein the one or more time slots is divided into multiple sub-channels (see Fig. 4, element 410, 415, 420, and 422, col. 12, lines 50-54);
- (c) wherein each sub-channel of the multiple sub-channels is divided into the one or more random access sub-slots that is non-overlapping in time (see Fig. 4, elements 430, col. 12, lines 59-62);

Chuah does not disclose non-overlapping in frequency. Eng discloses non-overlapping in frequency (see col. 2, lines 30-33). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine non-overlapping in frequency teaching by Eng with Chuah. The motivation for doing so would have been to provide to prevent the distortion in frequency. Therefore, it would have been obvious to combine Eng and Chuah to obtain the invention as specified in the claim 1.

Regarding amended claim 2, Chuah discloses transmitting information in a first one of the random access sub-slots by a first communication unit (see Fig. 4, element 430, col. 12, lines 61-62, wherein each mini-slot 430 is long enough to contain the identity of a remote node, for example, a first mini-slot 430 for a first communication unit); transmitting information in a second one of the random access sub-slots by a second communication unit (see Fig. 4, element 430, col. 12, lines 61-62, wherein each mini-slot 430 is long enough to contain the identity of a remote node, for example, a second mini-slot for a second communication unit).

Regarding amended claim 3, Chuah discloses transmitting, by the at least one communication unit, information in a plurality of the random access sub-slots (see Fig. 4, col. 12, lines 61-62).

Regarding amended claim 4, Chuah discloses the communication unit communicates identical information in each of the plurality of the random access subslots thereby increasing the probability of the information reaching a receiver (see Fig.

Regarding amended claims 5 and 7, Chuah discloses at least two of the random access sub-slots include two random access sub-slots that are adjacent in frequency (see Fig. 4, col. 12, lines 61-62. Wherein each mini-slot is used by different remote node, therefore, the sub-slots (mini-slots) are adjacent in frequency).

Regarding amended claims 6 and 8, Chuah discloses the predetermined bandwidth is 100 kHz, at least two of the random access sub-slots comprising a first and second random access sub-slot each having a 50 kHz bandwidth (see Fig. 4, col. 13, lines 1-12). Wherein Chuah does not specifically disclose each sub-slot having the 50 kHz bandwidth but Chuah discloses that the number of minislots may be dynamically changed based on the percentage of idle minislots and also this is a design choice.

Regarding amended claim 9, Chuah discloses randomly choosing, by the at least one communication unit, one or more of the random access sub-slots, thereby defining the selected one or more of the random access sub-slots (see Fig.

Regarding amended claims 10 and 11, Chuah discloses transmitting information in a first number of random access subslots by a first communication unit having a first priority (see Fig. 4, col. 13, lines 13-19); and transmitting information in a second number of random access subslots by a second communication unit having a second priority (see Fig. 4, col. 13, lines 19-28).

Regarding amended claim 12, Eng and Chuah disclose the subjected matter the same as claim 1.

Regarding amended claims 14 and 15, Chuah discloses the transmitter randomly selects the one or more of the plurality of random access subslots to transmit in (see Figs. 3 and 4, col. 11, lines 20-30, col. 12, lines 57-64).

Regarding claim 17, Chuah discloses the transmitter is selected from the group consisting of wireless radio units, cellular radio/telephones, wireless modems, computer modems, cable modems, satellite transmitters, satellite ground stations and fiber optic repeaters (see Fig. 1, col. 1, lines 36-47).

Regarding amended claims 18, 19, and claim 20, Eng and Chuah disclose the subject matter the same as amended claim 1.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,567,416 (hereinafter referred as "Chuah") in view of US Patent 6,370,153 (hereinafter referred as "Eng") as applied to claim above, and further in view of US Patent 5,822,359 (hereinafter referred as "Bruckert").

Regarding amended claim 13, Eng and Chuah do not disclose a symbol insertion element. However, Bruckert discloses the symbol insertion element (see Fig. 1, element 112, col. 7, lines 1-3, 12-22). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the symbol insertion element teaching by Bruckert with Eng and Chuah. The motivation for doing so would have been to provide to place the data into known states at specific times relative to the transmission. Therefore, it would have been obvious to combine Bruckert, Eng, and Chuah to obtain the invention as specified in the claim 13.

Allowable Subject Matter

5. Claims 4 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) US Patent 6,529,520 (Lee et al) discloses method and device for bandwidth allocation in multiple access protocols with contention-based reservation.

(2) US Patent 6,507,587 (Bahl) discloses method of specifying the amount of bandwidth to reserve for use in network communications.

(3) US Pub. 2002/0118661 (Voce) discloses method of optimizing random access performance in a mobile communications network using dynamically controlled persistence techniques.

(4) US Patent 5,960,000 (Ruszczyk et al) discloses system, device, and method for contention-based reservation in a shared medium network.

(5) US Patent 5,956,325 (Citta et al) discloses adaptive random access protocol for CATV networks.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on Mon-Fri, 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: September 29, 2005

A handwritten signature in black ink, appearing to read 'Phirin Sam', written over a horizontal line.

**PHIRIN SAM
PRIMARY EXAMINER**